

WHAT IS CLAIMED IS:

1. An isolated soluble receptor comprised of an IL-20RA subunit and a IL-20RB subunit, wherein the IL-20A subunit is comprised of a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 12, 38, 55, 63, and 65, and the IL-20B subunit is comprised of a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 15, 59, 61, 67, 68 and 69.
2. The soluble receptor of claim 1 wherein the IL-20A subunit and the IL-20B subunit are linked together by a polypeptide linker.
3. The soluble receptor of claim 2 wherein the polypeptide linker has about 100 to 240 amino acid residues.
4. The soluble receptor of claim 3 wherein the polypeptide linker has about 170 amino acid residues.
5. The soluble receptor of claim 1 wherein the IL-20A subunit and the IL-20B subunit each have a polypeptide linker fused to the subunit, and each of the polypeptide linkers has at least one cysteine residue, wherein at least one disulfide bond forms with a cysteine from the polypeptide linker of the IL-20A subunit and with a cysteine from the polypeptide linker of the IL-20B subunit.
6. The soluble receptor of claim 5 wherein the IL-20A subunit is fused to all or a portion of the constant region of a heavy chain of an immunoglobulin (Ig) molecule, and the IL-20B subunit is fused to all or a portion of the constant region of a light chain of an immunoglobulin molecule, wherein the light chain and the heavy chain are disulfide bonded together.
7. The soluble receptor of claim 6 wherein the constant region of the heavy chain is comprised of a CH1 domain, a CH2 domain and a hinge sequence that connects the CH1 domain with the CH2 domain.

8. The soluble receptor of claim 6 wherein the IL-20A subunit fused to the constant region of the heavy chain is comprised of an amino acid sequence selected from the group consisting of SEQ ID NOs: 23, 53, 54 and 62, and the IL-20B subunit fused to the constant region of the light chain of the Ig molecule is comprised of an amino acid sequence selected from the group consisting of SEQ ID NOs: 21, 57, 58, and 60.

9. The soluble receptor of claim 5 wherein the IL-20B subunit is fused to all or a portion of the constant region of a heavy chain of an Ig molecule, and the IL-20A subunit is fused to all or a portion of the constant region of a light chain of an immunoglobulin molecule, wherein the light chain and the heavy chain are disulfide bonded together.

10. A soluble IL-20 receptor comprised of a first polypeptide disulfide bonded to second polypeptide, wherein the first polypeptide is comprised of an amino acid selected from group consisting of SEQ ID NOs: 53 and 54, and the second polypeptide is comprised of an amino acid sequence selected from the group consisting of SEQ ID NOs: 57 and 58.

11. A soluble receptor comprised of a first polypeptide disulfide bonded to second polypeptide, wherein the first polypeptide is comprised of an amino acid selected from group consisting SEQ ID NOs: 23 and 62, and the second polypeptide is comprised of an amino acid sequence selected from the group consisting of SEQ ID NOs: 21 and 60.

12. A protein having a first polypeptide and a second polypeptide wherein the first polypeptide is comprised of the amino acid sequence of SEQ ID NO: 66 and the second polypeptide is comprised of an amino acid sequence selected from the group consisting of SEQ ID NOs: 70 and 71.